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Statistics of the Island of Portsea.

[Communicated to the British Association for the Advancement of Science by the Portsmouth and Portsea Literary and Philosophical Society, and read before the Statistical Section, at Belfast, September, 1852.]

(Continued from page 168.)

The Dockyard.

AMONGST the Government Establishments at Portsmouth, the Naval Arsenal is that which has long exerted the greatest influence upon the character and interests of the place. The town of Portsea is the most intimately associated with those interests; but they extend beyond that town, and, in different degrees, affect both the town of Portsmouth and the large and constantly-increasing suburbs. Hence the condition of Portsmouth, Portsea, and the suburbs, cannot be fully estimated apart from the dockyard.

Influence of the Dockyard on the locality.

The extent to which the duties of the dockyard are carried, and the description of those duties, bear upon the commercial as well as upon the strictly social interests of the place.

The dockyard is more especially a repairing and fitting-out, rather than a building yard. The fitting-out and paying off of ships at this port have a considerable effect on the commerce of the towns; as, in the first place, large numbers of both officers and seamen come here, having to provide, at least partially, for wants which they expect will extend over a period of three or four years; and, in the second, considerable portions of their salaries and wages are put into circulation, still further bearing upon the commerce of the towns. This being the case, a statistical report of Portsmouth would be incomplete, if it did not include the dockyard. The following report of that establishment has been therefore undertaken.

The dockyard at Portsmouth is perhaps the oldest establishment of its kind in the kingdom. On the southern coast of England, in the neighbourhood of this place, the infant navy in the time of Alfred the Great performed its feat of valour; no means, however, remain to identify it with this place. But that event, and many others which followed in the course of England's growth, showed the necessity of some establishment on this coast for building ships and vessels, and for their careful preservation in the winter season. There is historical evidence, that in the reign of John, docks were used for the king's ships and vessels at Portsmouth; but it does not appear whether they were constructed in that reign, or whether they had been constructed before.

Antiquity of the Dockyard.

The late Sir Nicolas Harris Nicolas, in the first volume of his History of the Royal Navy, chapter 6, p. 147, says: "In May, 1212, the sheriff of Southampton was commanded to cause the docks at Portsmouth to be inclosed with a strong wall, in the manner which the archdeacon of Taunton would point out, for the preservation of the king's ships and galleys; and the sheriff was also to cause penthouses to be erected for their stores and tackle;" referring to "*Rotuli Litterarum Clausarum*," p. 117, as his authority.

Town burnt by the French. It may not be practicable to trace its history from that time; but as the harbour of Portsmouth always continued to be important to the navy of England, it is probable that the dockyard was always kept up, subject to changes, as the general aspect of the nation or that of the locality changed. In 1337 or 1338, the French, having disguised themselves, came upon the town, and succeeded in burning it. No mention is made of the dockyard in the record of that event; but it can hardly be supposed that, whilst they destroyed the town, they would spare the arsenal.

Harbour defences constructed. To guard against the recurrence of such a calamity from the sea, military defences were constructed at the entrance of the harbour so early as about the year 1418. And Camden speaks further of "two block-houses at the entry of the haven, made of new heaven stone, which being by King Edward the Fourth begunne, King Henrie the Seaventh, as the inhabitants report, did finish, and strengthened the towne with a garrison."—*Britannia*, ed. 1610, p. 268.

It appears that early in the reign of Henry VIII., the dockyard assumed more decidedly the condition of an *establishment*; and in the early period of the British royal navy, Portsmouth was a most important rendezvous for it.

Loss of the "Mary Rose." A fleet having been assembled here in 1545, was going out to engage a French fleet off the coast, when the "Mary Rose," one of the largest ships in the navy, under some unskilful management, overturned and sank. Little progress in development was, however, made until the British navy advanced in importance, according as national and widely-extended conflicts gave the English a more comprehensive range of interests, and elevated their power upon the ocean.

State of Dock-yard in 1650. Mr. Charnock, and, after him, Mr. Derrick, recorded a tradition of the state of this dockyard at the middle of the 17th century; and immediately afterwards Mr. Charnock says, in a note: "Thomas Waite, quartermen, came into Portsmouth yard in 1650; at that time there was no mast-house nor dry dock; not more than one hundred shipwrights, and but one team of horses."

First dry dock constructed. "Isaac Hancock, quartermen, came to the yard in 1661; remembers that the first dry dock was made when Jamaica was taken [1655]; number of shipwrights as above, and forty or fifty labourers."

Mr. Derrick, in recording this tradition, says it was communicated by the two individuals above mentioned, when they were old men, to a gentleman who was living in 1805 or 1806.

Commissioner's house built. Soon after the restoration, the establishment was improved by the erection of buildings; the first of these, of which we find any record, was the commissioner's house, which was begun in 1664, and finished in 1666; the commissioner had previously lived in Portsmouth. It appears to have been some years later when houses were built for the principal officers of the dockyard.

Ships built in 17th century. A considerable quantity of work was executed in this yard during the last half of the 17th century. The following table contains the names, rates, and tonnage, of all the ships built at this yard during that period, as far as we have been able to trace them:—

Rate.	Ship's Name.	Tons.	Guns.	When Built.	Rate.	Ship's Name.	Tons.	Guns.	When Built.
1st	Royal Charles	1,531	100	1673	3rd	Swiftsure	978	70	1673
„	Royal James	1,422	100	1675	4th	Bonaventure..	514	48	1683
2nd	Coronation	1,427	90	1685	„	Assurance	680	50	1673
„	St. Michael	1,101	90	1669	„	Litchfield	.....	.....	1694
„	Ossory	.....	.....	1682	„	Nonsuch	368	42	1668
„	Vanguard	1,357	90	1678	„	Phoenix	389	42	1671
3rd	Eagle	1,047	70	1679	„	Weymouth	673	48	1693
„	Expedition	1,059	70	1679	5th	Dartmouth	265	.....	1655
„	Monk	703	60	1659	„	Richmond	211	.....	1655
„	Montague	829	60	1654	6th	Greyhound	184	16	1672
„	Russell	1,177	80	1692	„	Newport	.....	24	1694
„	Shrewsbury	.....	.....	1694	„	Sandadoes	.....	16	1675

The preceding table shows that towards the close of the period which it includes, the *new* work performed in this yard was less than it had been some time previously. And the following table shows that the number of shipwrights employed in the yard in the two years 1694 and 1697 was comparatively small, whilst in the former of those years, the number of *riggers* was greater than three-fifths of the number of shipwrights, apart from their apprentices, or servants, as they were called in the official language of that time. This relative condition of the workmen indicates the general character of the work that was carried on in the establishment at that time, that is, during the war. It appears by the original documents from which these details have been taken, that the *prest* shipwrights and caulkers were in the condition of the hired artificers of the present day, employed only whilst the duties of the yard were too great for the established complement of artificers.

Number of
artificers.

Description of Workmen.	1694.	1697.	1699.	Description of Workmen.	1694.	1697.	1699.
Shipwrights	59	67	216	Bricklayers and masons	.....	.....	26
Prest ditto	25	43	.....	Ditto apprentices	.....	.....	4
Shipwrights' apprentices	30	31	109	Sailmakers	.....	.....	8
Prest ditto	2	6	.....	Sailmakers' apprentices	.....	.....	2
Apprentices to carpenters of ships	18	16	.....	Oar-maker	.....	.....	1
Caulkers	9	29	41	Blockmakers	.....	.....	3
Prest ditto	7	11	.....	Locksmith	.....	.....	1
Caulkers' apprentices	.....	1	9	Locksmith's apprentice	.....	.....	1
Prest ditto	.....	3	.....	Riggers	53	.....	42
Joiners	22	7	39	Sawyers	36	24	34
Joiners' apprentices	4	1	6	Scavellmen	.....	.....	17
House carpenters	.....	.....	53	Labourers	37	4	250
House carpenters' apprentices	.....	.....	3	Pitch-heaters	2	2	2
Plumbers	.....	.....	2	Oakum boys	3	20	25
				Quarter boys	3	7	12

Peace was restored; and it appears that a great change was made in the establishment between April, 1697, and Midsummer, 1699. The number of shipwrights and of their apprentices, and the number of labourers, were greatly increased; the number of riggers was

diminished; and various classes of workmen in small numbers were placed on the list, which it does not appear were on the establishment before; the work for which they were now introduced may have been previously done by contract. And still there were other workmen employed which are not described in the pay-list referred to: no ropemakers are mentioned, whilst the staff of the dockyard included a master ropemaker and a clerk of the rope-walk. And further, an order was given in 1688, that when cables were made in the rope-house, all the men of the fleet were to assist.

Dockyard
officers and
salaries.

The following particulars will show that during the war, the condition of the officers underwent a revision. In December, 1691, the payment of the officers' salaries was ordered to be made at the dockyard, when the annual amounts were as follow:—

Master Shipwright	76 <i>l.</i> 10 <i>s.</i> , with 1 <i>s.</i> a-day exchequer fee.
Master Shipwright's Assistant	20 <i>l.</i>
Storekeeper	50 <i>l.</i>
Master Caulker	10 <i>l.</i>

A large proportion of the emoluments of officers was then derived from various perquisites; one of these was the apprentices which the regulations of the service allowed them to take. The premiums which persons were willing to pay to superior shipwright officers, to have their sons apprenticed to them, and the wages which the masters received on account of their apprentices during the term of service, amounted to no inconsiderable sum.

By an Order in Council of the 19th December, 1695, a new rate of salaries was authorized, and ordered, in the following January, to be carried into effect, as follows:—

Master Attendant	.....	} 200 <i>l.</i> per annum each.
Master Shipwright	.....
Storekeeper	.....
Clerk of the Cheque	.....
Clerk of the Survey	.....	} 100 <i>l.</i> per annum each.
Master Shipwright's Assistant	.....
Master Caulker	.....
Master Ropemaker	.....
Clerk of the Ropeyard	.....	} 80 <i>l.</i> per annum.
Boatswain of the yard	.....
Porter	.....	30 <i>l.</i> „
Master Mastmaker	.....	} 3 <i>s.</i> per diem.
„ Boatmaker	.....
„ Sailmaker	.....
„ House Carpenter	.....
„ Bricklayer (or Mason)	.....	2 <i>s.</i> 6 <i>d.</i> „
Foreman of Shipwrights	.....	3 <i>s.</i> „
Quartermen	.....	2 <i>s.</i> 6 <i>d.</i> „
Foreman of Riggers	.....	2 <i>s.</i> „
Foreman of Labourers and Scavellmen	.....	1 <i>s.</i> 6 <i>d.</i> „
Chirurgeon of the yard	.....	40 <i>l.</i> per annum.
Purveyor	50 <i>l.</i> per annum, besides travelling charges.	

Various extra allowances to the master shipwright and the clerk of the cheque, and all extra allowances to the master ropemaker and the clerk of the rope-yard, were at the same time cut off. By a letter from the Navy Office, written during the same month, it was ordered

that the salary of the second master attendant should be the same as the first master attendant's, and the salary of the second assistant to the master shipwright the same as that of the first assistant. Apprentices continued to be a source of emolument to the professional officers down to the date when the Board of Revision sat, early in the present century. The master shipwright was allowed to have five apprentices, each of his assistants three, and the other officers of inferior grades had also their apprentices. The same form of perquisite was extended, with limitation, to the artificers; but in this grade the emolument did not exceed the current proportion of the wages: a premium was out of the question when the master was a working shipwright. An artificer having an apprentice was legally entitled to his service during the whole of the term, and if he died during that term, then his representatives were entitled to the advantage of the apprentice's service till the expiration of the term. Apprentices.

The artisans were allowed as a perquisite the chips which they had made at their work, in the reign of Charles II. The value of this privilege was never definite, although it was considerable at the close of the 17th century and early in the 18th, when wood was the principal, if not the exclusive, article of fuel in this part of England. The system of adding perquisites to a small pecuniary remuneration, was tried with both officers and artisans for more than a century. But such privileges were generally liable to encroachment on the part of those who enjoyed them, and the Navy Board endeavoured, from time to time, to fix such conditions to the exercise of the privilege of chips, as appeared likely to protect the interests of the Government. Chips. All efforts seem, however, to have failed of defining and limiting the extent of that privilege in such a way as to ensure mutual satisfaction, perhaps because that mode of remuneration was essentially vicious in principle. Under a wiser economy of more recent institution, the salaries and wages of officers and men have been finally adjusted, on the condition that they should be the exclusive direct rewards of service.

The care of the dockyard during the night was entrusted to watchmen, and it appears that some time before the Restoration, the number was increased. When the establishment underwent a revision, after that event, it was deemed that some abatement might be made in the care and expense bestowed on this object. The Navy Board, therefore, having received general instructions from the Duke of York on the 28th January, 1661-2, issued their order on the 10th May, 1662, "that the watchmen should be reduced to the ancient number of four; and for the better discovery of the good or ill performance of their duty," they ordered that a bell should be hung up at each watch-house, to answer one another by striking every half-hour; and in their letter to the officers of the dockyard, they stated that four bells had been ordered to be sent to Portsmouth for this use. It appears that little danger was apprehended during the night; the smallness of the number of watchmen implies this; and it is further intimated by the fact that persons were allowed to pass in and out of the dockyard as they chose, by night as well as by day. When the time of the Revolution drew near, and the state of the nation became unsettled, it was deemed unsafe to continue this liberty. On the 19th November, 1688, Watchmen.

Watchmen

therefore, Sir Richard Beach, the resident commissioner, wrote to the clerk of the cheque, storekeeper, and porter, stating that "it had been a common practice in this yard to leave the dock gates unlocked all night, whereby his Majesty's stores were exposed to thievery and embezzlement, and people coming in and out at all hours in the night, which did and might prove very hazardous and prejudicial to his Majesty's service." He then directed that the gate should be locked and bolted precisely at eight o'clock at night in winter, and nine in the summer, and that no person should be let in or out after that time, till the watch was relieved in the morning.

At the crisis, however, a more efficient guard was required in the dockyard; danger seemed imminent; for the Irish soldiers who had been quartered in the garrison, it was said, were very insolent, and even threatened the destruction of the naval establishment.

In the alarm thus produced, Sir Richard Beach ordered the artificers and labourers to attend on the 13th December, armed with firelocks and provided with ammunition, and to mount guard for the protection of the dockyard during the night.

The master shipwright was directed to have the command of the guard till midnight, and his assistant to succeed him then, and retain the command till the watch was relieved in the morning.

It was at the same time ordered, that if the same guard should be required on the night of the 14th, the clerk of the cheque and clerk of the survey successively were to command it; and if it were required to be repeated the third night, the storekeeper and boatswain of the yard were similarly to have charge of it.

It does not appear that the watch was very strictly kept by the four watchmen of the dockyard, for on the 31st December, 1689, the commissioner wrote to the clerk of the cheque: "Whereas it is become a common practice with the watchmen of this yard to keep in their watch-houses the time of their watch in the night, and to omit the striking of the bell, whereby the people cannot know the certain time of the night; and when they do strike, they strike commonly more or less than the hour is, being half asleep and half awake as they come out of their watch-houses, whereby their Majesties' stores and houses are exposed to thievery, embezzlement, or fire, by their remissness in their duty. These are therefore to direct and require you to let them know, at the time of their going to the watch, that, for the time to come, those which shall be found to sleep in the time of their watch, in their cabins, and not to strike the bell true, whereby we may know the certain time of the night, shall not only be discharged and checked their wages, but shall receive such further punishment as the Commissioners of the Admiralty shall impose; it being death for a sentinel to forsake his post, or sleep on his watch, and I think the charge of this is not inferior to that."

The system was, however, defective in its character, and admonition appears to have failed of making it what it was required to be. In a time of danger, this was perceived, and efficiency was sought to be realised in supervision.

Information was conveyed to the Commissioners of the Admiralty in 1696, "that some evil designs were then intended by ill-disposed people against the magazine here and that part of the royal navy as

were lodged at this port, for prevention whereof, by particular injunction from the Honourable Navy Board, it was required for the more effectual disappointment of such attempts," and the resident commissioner issued an order accordingly on the 4th November of that year, that the respective officers of this yard should take the nightly watch by turns, as the most suitable means to frustrate those intentions. This practice fell into neglect after some time, but during the War of the Succession it was revived, apparently with a greater degree of strictness.

In January, 1704-5, fears were entertained of machinations on the part of the enemy. The slender protection of the dockyard at that time, coupled with the permission to persons to pass in at the dockyard gates at unseasonable hours of the night, "under pretence of belonging to her Majesty's ships either lying in the docks or at the jetty heads," exposed the yard, it was alleged, "in a more easy manner than could be wished for by the enemy." The officers belonging to the dockyard were therefore directed to attend, in turns, regularly and personally to the charge of the nightly watch, and to report to the commissioner in the morning the occurrences of the night. The list included almost all who had any authority in the dockyard; the clerk of the cheque was not, however, included. But as it will show very nearly what was the official staff at that time, it is added :

"A list of such officers (and others) as are appointed to inspect the watch each night in this her Majesty's yard, viz. :—

1. Master Attendant	{ During the war, and that they do not lie on board the ships in ordinary.	17. Master Bricklayer
2. Master Attendant		18. Master Sailmaker
3. Master Shipwright		19. Porter of the yard
4. Storekeeper		20. Mr. Deane, Freemason
5. Clerk of the Survey		21. Mr. Brown, Quartermen
6. First Assistant.		22. Mr. Merrett, Blockmaker
7. Second Assistant		23. Mr. Autram, Teamer
8. Master Caulker		24. Mr. Hartfield, Twicelaid Ropemaker
9. Clerk of the Ropeyard		25. Mr. Hamond, Foreman Shipwright
10. Master Ropemaker		26. Mr. Durley, Foreman Caulker
11. Surgeon		27. Mr. Eastwood, Foreman afloat
12. Boatswain of the yard		28. Mr. Betts, Quartermen
13. Master Mastmaker		29. Mr. Leggatt, Foreman Mastmaker
14. Master Boatbuilder		30. Mr. Holmes } Quartermen
15. Master Joiner		31. Richard Dixon }
16. Master House Carpenter		32. Ben. Lodd, Foreman yard
		33. Mr. Smith, Teamer

On the 15th February following, Commissioner Gifford addressed another letter to the officers, complaining that not more than two or three of them complied with that part of the preceding order which required them to render to him in the morning an account of the occurrences of the night, and informing them that whoever should for the future omit to do so might "expect to be respited."

The civil gnard of the dockyard was afterwards placed upon somewhat different footing. An officer, called the *master warden*, had the control of it, and the persons charged with keeping watch during the day were called *wardens*.

In the night, watchmen, being men employed by day in the dock- Watchmen.

yard, took their stations, voluntarily undertaking this duty, in addition to their labour in the day, for certain additional remuneration. Until that system of police was abolished, the officers continued to exercise a supervision over the nightly watch.

Military
guard.

A military guard was also stationed in the dockyard, both by day and by night.

Police.

On the 27th February, 1834, an entirely new form of civil guard was introduced—the present police force, under a lieutenant of the navy, with the style of director of police. The established number is ninety-one. A third part of this number is constantly on duty at the same time, by night and by day.

Military
guard.

The military guard remains as formerly: it consists of 1 captain, 2 subalterns, 3 sergeants, 5 corporals, 2 drummers, and 63 privates. 21 sentinels are constantly on duty.

Docks.

Until the year 1698, the only dock in this yard was a wet dock. When, therefore, a ship required any external repair below the part which could be got at by the ebbing of the tide, such ship had to be sent either to Chatham or Woolwich for that purpose.

Towards the close of the 17th century, a basin was constructed on the western side of the yard, facing the harbour, of the following dimensions: from north to south, 218 feet, and from east to west, 247·5 feet, and it occupied an area of $1\frac{1}{2}$ acre. The breadth of the entrance was 53 feet. It was enclosed with two pairs of gates, one pair opening externally, and the other opening internally. Within this basin, and on its eastern side, a dry dock was built, 247 feet 6 inches long, and 82 feet 6 inches broad at the upper part; and the first large ship that was taken into it was the “Royal William;” this was on the 28th June, 1698.

“She drew 17 feet 3 inches water abaft; there was 19 feet water in the wet dock at that time, and the rise of the tide then was 14 feet; therefore the ship drew 3 feet 3 inches water more, and the water in the said dock was 5 feet deeper than the tide flowed [rather ebbed], which difference was occasioned by digging away the ground of the dock so much below the surface of the low-water level, and is to be pumped out of the dry dock by the measures prepared for that purpose.”—(Letter from the officers of the dockyard to Commissioner Greenhill, dated 10th November, 1698.)

Another dock was in the course of construction at the same time, and a third was formed before the year 1725. A new dock was made on the eastern side of the basin, 206 feet $1\frac{1}{2}$ inch long at the bottom, and 229 feet 9 inches at the top, 34 feet 3 inches broad at the bottom, and 84 feet 8 inches at the top. It is 26 feet 2 inches deep, and contains water to the depth of 19 feet 4 inches at spring tides.

This dockyard was not brought to a state of maturity until the time when the late Sir Samuel Bentham filled the situation of director-general of works under the Admiralty.

Improvement
of the Dock-
yard.

On the 24th April, 1795, the Navy Board, in pursuance of instructions received from the Lords Commissioners of the Admiralty, wrote to Sir Charles Saxton, commissioner at this dockyard, desiring that “Brigadier-General Bentham might have free access into the dockyard at all seasonable times, to make his observation on any mechanical powers used therein.”

Soon after this time, General Bentham conceived the plans for very extended improvements in the dockyard. His primary object appears to have been to make this dockyard as complete as possible for careening, repairing, and fitting out ships. This required increased means of performing such duties, by jetties, docks, and capacity of basins. To this his attention was therefore first directed.

The dockyard occupies an area of 118 acres 1 rood and 9 perches, having at various times, and lastly in 1848, been enlarged both by the purchase of additional land and by encroachment into the harbour, as the extent of public works in this establishment required greater means for carrying them on. Twelve parcels of land were purchased or otherwise obtained in the year 1711, for enlarging the dockyard, and for the erection of a boundary wall, which was built between June and December in that year. We have not been able to ascertain whether those twelve pieces were all included in an area of 38,985 feet purchased in that year, and for which the sum of 118*l.* 1*s.* 1*d.* was paid. By this enlargement, as it appears, the dockyard was made to include an area of 66 acres, as this is recorded to have been the extent of it in 1712.

Area of the
Dockyard.

The following are the principal buildings in the dockyard:—

The Royal Naval College is a handsome building, in the form of the letter H. It was founded by George II., for seventy students, and designated the “Royal Naval Academy.” The foundation-stone was laid on the 8th May, 1730, on the north side, under the dining-room; and on the 12th May, 1732, it is stated another wing was to be built. In 1733, Commissioner Hughes was appointed governor, and William Hasleden first master. At that time, there were only seven students, and the rules of the establishment required that they should go to bed at nine o’clock in the evening. It was much improved and enlarged in the reign of George III., at whose desire the name of Royal Naval College was substituted for its original name. The object of the college formerly was to educate *youths* for the naval service; but this function has lately ceased, or at least been suspended. It was re-opened upon the basis of its new constitution on the 24th December, 1838; and now, instead of training youths as naval cadets, officers bearing the rank of mates are there educated and examined as candidates for the rank of lieutenant.

Royal Naval
College.

Besides these young officers in their elementary career as naval men, the establishment includes 24 officers on half-pay, for the prosecution of their studies to higher proficiency than their early education led to; viz., 6 captains, 6 commanders, and 12 lieutenants; and to these have been added lately 3 masters.

Cadets for the artillery companies also are educated at the college. The subjects of study are mathematics, steam, gunnery, and fortification.

Connected with the establishment is the “Excellent,” naval gunnery ship.

The governor is the First Lord of the Admiralty for the time being; and the staff of the college includes a captain-superintendent, who is the captain of the gunnery ship; a professor of mathematics, who is also chaplain of the gunnery ship; a mathematical master; an instructor in fortification and mechanical drawing; and an assistant in the

observatory. There are also a clerk and a matron. All these have apartments in the college. Candidates for naval and marine cadetships are now examined there, before admission into the service.

Central School
of Mathematics.

The Central School of Mathematics and Naval Construction is a neat building, 176 feet in length, 45 feet in breadth, and 36 feet in height. This building was constructed for the late School of Naval Architecture, after a design by Edward Hall, Esq., begun in 1815, and completed in 1817. That institution and the Royal Naval College were, by virtue of an Order in Council of 30th January, 1816, united into one establishment, under one governor and one professor. The School of Naval Architecture was abolished in 1832.

In 1848, the Board of Admiralty formed a new plan for the superior education of a select number of shipwright apprentices, with a view to their scientific qualification for officers in the dockyards. The same building is used for that purpose. A small number of pupils only are sent to it, after the close of the fourth year of their apprenticeship as artificers in the dockyards, to finish their term of seven years in the study of mathematics, under the principal of that school, Dr. Woolley, and continuing the study of ship-building under the direction of the master shipwright of the dockyard.

This school is quite distinct from the Royal Naval College, and is materially different from the late School of Naval Architecture.

Chemical
Laboratory.

Immediately in the rear of the above building is a laboratory, which was erected, in 1848, for the use of Mr. W. J. Hay, the chemical assistant of the dockyard, an office of some importance, that was created in 1847, and to which are referred for investigation and report such subjects as require a knowledge of chemistry to be brought to bear upon them.

This department is connected with the educational establishments of the dockyard, for the students of the central school are taught the elements of chemical science and the methods of manipulation, a provision for diffusing a knowledge of this subject over the various dockyards of the kingdom, and one calculated to bring that increasingly important science into more general usefulness in these national establishments.

Wood mills.

One of the most interesting departments of labour in the dockyard is the *wood mills*, in which the block machinery is situated. In 1801, this was erected, under the direction of General Bentham. The late Sir Isambert Brunel had constructed a working model of certain machines for cutting the shells and sheaves of blocks, which was shown to the Lords of the Admiralty, who referred it to General Bentham. The plan was approved and recommended; and the machinery, already constructed in London, was transferred to Portsmouth in 1802, and was put in operation in 1804; but many more parts were deemed by Mr. Brunel necessary to the completion of the machinery, which were not finished till 1808. This machinery at once superseded the inconveniences to which the navy was subject through the imperfections of blocks made by hand; for both the shells and the sheaves were cut with mathematical exactness; and amongst the other improvements which resulted from Mr. Brunel's labours, was the greater *strength* of the blocks.

The machinery is so complete, and yet so simple, that it does not

require skilled artificers to use it, labourers exercising ordinary care being competent to perform the work at the machinery. Four men are employed in making the shells, and these can make as many with the machinery as fifty men could make by hand. The saving of labour in making the sheaves is not quite so great in relation to hand-work, for it is estimated that two men at the machinery can perform the work of only twenty men working by hand. The system is so complete, that experience has not suggested any way in which its efficiency could be increased. It includes the following machinery:—

Two 30-horse power engines, which consume daily 2½ tons of coals		1 Round sheave saw
1 Boring machine	Three sets of each size, viz., small, middling, large.	1 Close ditto
1 Mortising ditto		1 Bench ditto
1 Corner ditto		1 Coaking machine
1 Scoring ditto		1 Drilling ditto
1 Shaping ditto		1 Boring ditto
2 Dead-eye ditto		2 Rivetting hammers
1 Shot-rack ditto		6 Facing machines
1 Universal boring ditto		1 Stamping ditto
2 Bench-saws for cutting blocks of wood		3 Broaching ditto
1 Large circular saw		1 Drilling lathe
1 Cross-cut ditto		5 Turning machines
4 Circular frame ditto		3 Polishing or testing machines
		8 Turning lathes

The following table will show the number and description of blocks made with this machinery in the year 1849:—

Machines.	Size of Blocks.	Number of Single Block Shells.	Number of Double Block Shells.	Number of Treble Block Shells.	Number of Clewline Block Shells.	Number of Long tackle Block Shells.	Number of Sister Block Shells.	Number of Sheaves for the Blocks.	Number of Pins for the Blocks.	Number of Dead-eyes.	Number of Block Shells to each size.
Small Machine.	Inches										
	4	798	..	..	..	..	..	798	798	..	798
	5	4,460	585	..	..	..	..	5,630	5,045	101	5,045
Middle Machine.	6	3,300	988	..	139	..	..	5,415	4,427	507	4,427
	6½	694	95	..	..	..	..	884	789	..	789
	7	5,039	2,088	..	259	..	..	9,474	7,386	963	7,386
Large Machine.	8	5,426	2,828	..	239	..	10	11,341	8,513	715	8,503
	9	1,734	478	..	..	..	..	2,690	2,212	335	2,212
	10	2,178	1,386	10	79	60	..	5,179	3,773	1,088	3,713
	11	1,301	395	6	13	32	..	2,186	1,779	626	1,747
	12	878	494	56	..	69	..	2,172	1,566	356	1,497
	13	473	186	63	..	27	1	1,090	778	20	750
	14	482	175	52	..	5	14	1,026	747	154	728
	15	65	95	26	..	17	18	403	256	292	221
	16	140	85	15	..	..	12	379	264	315	252
		26,968	9,878	228	729	210	55	48,667	38,333	5,472	38,068

Wood mills.

Hitherto all blocks less than 4 inches in length, and above 16 inches, have been made by hand; these are, however, very few in comparison with the intermediate sizes, so that it was not originally deemed advisable to incur the expense of smaller and larger machinery for such. But an order has lately been given for a turning-lathe for making blocks more than 16 inches in length.

All the shells of blocks made by the machinery are finished or smoothed by hand labour.

There are 19 men employed in the blockmaking department, viz., 12 in making the shells (these make those shells also which are manufactured entirely by hand), 5 in making sheaves, 2 in making the pins; and 9 boys are employed in carrying the blocks to the different machines, &c.

The preceding table shows the amount of work performed by the machinery with this number of hands, working ten hours a-day; but if the machines were worked with as many men as could be employed at them, and a proportionate number of finishers and boys, working the same period of time throughout the year, the produce would be about five times as great of the sizes and descriptions shown in the table.

From the time that the dockyard establishment began to present the means of greater service to the navy, after the middle of the 17th century, attention was increasingly directed towards an extension of those means, and storehouses and docks were constructed with that object.

The following table contains the dimensions of the docks, with the dates of their construction:—

No. of the Dock.	Length of Dock at Bottom from Mitre Post.	Length at Top from Mitre Post to the Head.	Width of Dock at Bottom.	Width of Dock at Top.	Depth at Midships.	Date of Opening the Dock.
	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	
1	228 3	254 1	33 4	92 9	26 9 $\frac{3}{4}$	Before 1725
2	221 7	253 4	35 2	89 2	31 8 $\frac{1}{4}$	1802 or 1803
3	228 2 $\frac{1}{2}$	264 1	27 7	90 10	32 8	1803
4	206 1 $\frac{1}{2}$	229 9	34 3	84 8	26 2	1772
5	204 11 $\frac{3}{4}$	227 7	34 2	85 6 $\frac{1}{2}$	25 0 $\frac{3}{4}$	Before 1725
6	190 2 $\frac{1}{2}$	223 5	31 11	83 3	23 7 $\frac{1}{2}$	"
7	263 0	293 0	35 0	100 0	32 0	1849
8	250 9	295 3	36 0	88 0	26 1	1850

The water below the level of the ebb tide is pumped out of the docks by means of chain pumps, a description of pumps first used for this purpose in 1696; these are now worked by steam-power.

About the close of the last century, at the advice of General Bentham, a large basin was formed, partly upon the site of an old basin that was not sufficiently capacious for the duties of the establishment.

This basin was completed in 1801, and on the 12th June in that year it was opened, and the "Britannia" taken in. It occupies an area of 2 acres and 78 perches.

The docks numbered 2, 3, 4, and 5, in the preceding table, open into the basin; that which is numbered 2 has no covering, being used to admit ships with their masts in. Nos. 3, 4, and 5, have housings to shelter the ships taken into them for repair.

There are five slips in the yard for building new ships, all of which are housed over, to protect the ships from injurious exposure to the weather, and to render the process of seasoning more effectual whilst they are in frame. The three slips of the most recent construction are covered with corrugated galvanized iron roofs; the other slips with wooden roofs. Building-slips.

Connected with the steam factory in this yard, is another and a more spacious basin, for the admission of steam ships and vessels requiring anything to be done to their machinery. It is 900 feet long and 400 feet broad, and includes an area of 6 acres 2 roods and 26 perches. The foundation stone of this basin was laid by Rear-Admiral Hyde Parker, admiral superintendent of the dockyard, on the 13th January, 1845, at the south wall, with the following inscription, the work having been commenced on the 10th June, 1843:—

"This Stone is laid
This 13th day of January, 1845,
By Hyde Parker,
Rear-Admiral Superintendent of Her Majesty's
Dockyard:
Commander-in-Chief Admiral Sir C. Rowley;
William Purdo, Master-attendant;
John Fincham, Esquire, Master-shipwright;
W. Pennell, Storekeeper;
Robert Taplin, Engineer and Mechanist;
James Henderson, Surgeon;
Director-General of Architectural and Engineering Works,
H. B. Brandreth, Capt., R.E.
Local Director, R. S. Beatson, Lieut., R.E.
Henry Wood } Clerks of Works.
John Stansfield }
Peter Rolt, Esquire, Contractor.
W. E. Smith, Agent to ditto."

The basin was opened for general use on the 25th May, 1848, by her most gracious Majesty in person. The depth of water in it at spring tides is 26 feet 6 inches. There is one dock, No. 7, opening into the west side of this basin, which is used for steam vessels; and on the east side, two other docks are in the course of construction.

On the western side of the basin stands a building 687 feet long and 47 feet in breadth; it was begun in 1847, and finished in 1849, and was intended for a storehouse connected with the engineering department; but in the unfinished state of that department, it has been used as a steam factory. Steam factory.

Most of the buildings of the dockyard are formed of brick, and are generally of good substantial construction.

The following table shows the principal dimensions of the storehouses and other public buildings in the dockyard:—

Dockyard
buildings.

Description of Buildings.	Length.		Breadth.		Height.		Date of Erection
	Ft.	In.	Ft.	In.	Ft.	In.	
Present use storehouse	192	2	51	0	44	2	1697
Clock storehouse.....	209	11	50	11	44	2	....
South storehouse.....	193	3	51	1	44	4	....
West sea storehouse	220	0	40	0	....	....	....
East sea storehouse.....	151	6	43	1	....	....	....
Return store	51	3	53	7	18	6	....
East masts houses.....	302	9	138	4	14	4	....
West masts houses.....	122	3	106	7	....	....	....
New mast shed	127	11½	23	11	11	9	....
New mast store	140	0	91	0	41	0	1844
Mast pond	318	9	190	0	....	....	....
Shed over mast pond	190	11½	66	9	17	9½	....
West hemp house	208	0	40	0	....	....	1771
East hemp house.....	175	0	40	0	....	....	1781
Hatchelling house	144	3	37	4	25	6	....
Working boathouse	140	5	90	8	14	6	....
New boat store, built of brick, stone, and iron.....	171	0	127	6	50	4	1848
Ropery.....	1,080	0	53	0	....	....	....
Sail loft	192	7	51	0	42	6	....
Riggers' shed attached thereto	187	5	34	6	7	6	....
Rigging house.....	220	7	51	0	42	6	....
Smithery	180	4	138	9	22	1	....
New smithery in course of erection, with four chimnies 100 feet high.....	209	0	209	0	38	0	....
Tarring house	140	8	47	0½	27	6	....
Engine and boiler house.....	147	1	139	2	29	8	....
Copper store	46	9	17	6	19	9	....
Public offices for the officers	140	0½	36	0	....	....	1788
Building at King's Stairs	44	11	42	2	26	0	....
Pay office and main guard	88	7	64	4	31	6	1796
Semaphore .....	....	....	....	....	....	....	1813
St. Ann's chapel.....	76	2	50	1½	43	9	1786
The Port Admiral's house	215	0	70	0	....	....	1785

Ropery.

The duties of the ropery are performed partly by machinery and partly by hand, and they occupy 219 persons. The strands of rope are made by machinery; the ropes themselves are made by *hand*. The largest ropes made there are 25-inch cables, and 136 fathoms is the greatest length that can be made there. Eighty men are employed in spinning twine and the lighter descriptions of work carried on in the building.

Smithery.

Smiths were first employed as a part of this establishment in 1726, and the officers considered that thirty tons of iron and thirty tons of coals would then be enough for the year. Coals were then for the first time advertised to be contracted for, for the use of the yard. They had before been procured in the small quantities of one or two bushels for the use of the locksmith. In 1741, the number of smiths was increased. There were then 2 firemen at 2s. 6d. a-day, 3 at 2s. 2d., and 9 at 1s. 10d.; 45 hammermen; 2 servants to the master smith, and 1 to the foreman. At the beginning of the present century, there were 116 smiths employed in this yard. The number was gradually increased in the course of the war, until, in 1814, it had risen to 179.

The establishment was then reduced gradually, and in 1817 there were only 138; but in 1819, the number was raised to 163, and continued so till 1840. The number in the year 1849-50 was 180.

In the year 1810, the smiths worked 15 hours a-day, and used in the course of the year 745 tons of iron; in 1813, they worked 13 hours a-day, and used 842 tons; in 1822, they worked 10 hours a-day, and only 5 days in a week, when they expended only 434 tons of iron; in 1840, they worked 10 hours a-day, and used 548 tons of iron; in 1849, the number being increased to 180, they still worked 10 hours a-day, when they used 866 tons.

It has been stated that at the time of the Revolution, the apprehension for the safety of the dockyard was such as to lead to the arming of the men belonging to the establishment. This was intended only for the immediate occasion of mounting guard during the panic, consequent on the great transition of the time. A more systematic arrangement was made in 1715. On the 20th September, the commissioner proposed that the artificers of the dockyard should be formed into a regiment. Towards the close of the following month, the proposal was ordered to be carried into effect; the corps to consist of 12 companies, of 50 men each. Each company included a sergeant, a corporal, and a drummer; and 2 extra lieutenants of the line were allowed to drill them. This corps of volunteers was called the "Commissioner's Regiment," as under such designation they were allowed one night's pay for having been out on Sunday, the 20th October, 1723, to solemnize the king's coronation; and on the 21st October, 1730, it was stated that the officers and workmen of the dockyard should not do garrison duty unless specially ordered to do so.

A similar scheme was revived in 1803. On the 24th August, volunteer companies were directed to be formed from the artificers of the dockyard, each company to consist of 1 captain, 1 lieutenant, 1 ensign, 3 sergeants (including 1 drill sergeant), 3 corporals, 2 drummers, and as nearly as possible 82 privates. There were 5 companies formed. The officers were 1 colonel, 1 lieutenant-colonel commanding, 1 major, 5 captains, 5 lieutenants, 5 ensigns; and there were 461 rank and file.

The artificers of the dockyard were again organized into a military corps in April, 1847. They were formed into 8 infantry companies, in 2 battalions, 6 artillery companies, 4 boat brigade, and 1 sapper company. The officers were 1 colonel commandant, 1 lieutenant-colonel, 4 majors, 19 captains, 34 lieutenants, and 1 adjutant. The men were drilled by sergeants allowed from the marine and artillery companies. The dockyard battalions still continue to be drilled during the summer months, and are kept in readiness for any such service as that contemplated in the formation of the corps.

Soon after the middle of the 17th century, the establishment increased rapidly. It is not, however, easy to trace the steps of improvement as they were taken; but the following table shows the number and description of workmen employed about the year 1696, with the wages paid to them for one quarter, and the allowance for lodging to those who were entitled thereto :—

Number of
workmen in
1896.

Description of Workmen.	Number of Men.	Wages Paid.			Allowance for Lodging.	Total.		
		£	s.	d.	£	s.	d.	
Servants to Master Shipwright	5	36	10	8	....	36	10	8
„ 1st Assistant	3	25	2	2	....	25	2	2
„ 2nd Assistant	3	23	19	11	....	23	19	11
„ Master Caulker	3	27	2	1	....	27	2	1
„ Master Boatbuilder	2	13	12	7	0 5 2	13	17	9
„ Master Mastmaker	2	15	15	2	0 5 3	16	0	5
Foremen	3	39	14	0	0 8 0	40	2	0
Servants to ditto	5	31	16	3	0 12 8	32	8	11
Quartermen	17	173	15	0	2 3 11	175	18	11
Servants to ditto	17	113	0	6	2 4 8	115	5	2
Servants to widows of deceased workmen	10	69	9	8	1 5 11	70	15	7
Shipwrights	216	1,828	15	1	30 9 9	1,859	4	10
Servants to ditto	42	251	19	0	5 2 6	257	1	6
Servants to Ships' Carpenters	17	115	5	9	2 4 2	117	9	11
		2,765	17	10	45 2 0	2,810	19	10
<i>Caulkers.</i>								
Foreman	1	14	2	10	0 2 8	14	5	6
Servant to ditto	1	4	11	0	0 2 8	4	13	8
Quartermen	2	24	1	10	0 5 4	24	7	2
Caulkers	41	333	19	11	4 6 2	338	6	1
Servants to ditto	9	62	18	2	1 4 0	64	2	2
		439	13	9	6 0 10	445	14	7
Joiners	39	300	5	9	4 18 5	305	4	2
Servants to ditto	6	24	3	9	0 13 8	24	17	5
		324	9	6	5 12 1	330	1	7
House Carpenters	53	417	5	9	6 9 8	423	15	5
Servants to ditto	3	25	19	9	0 8 0	26	7	9
		443	5	6	6 17 8	450	3	2
Plumbers	2	6	13	9	....	6	13	9
Bricklayers	21	109	7	8	2 3 5	111	11	1
Servants to ditto	3	19	6	9	0 7 9	19	14	6
		128	14	5	2 11 2	131	5	7
Masons	5	28	2	1	....	28	2	1
Servant to ditto	1	4	11	0	....	4	11	0
		32	13	1	....	32	13	1
Sailmakers	8	68	16	3	0 17 9	69	14	0
Servants to ditto	2	14	11	6	0 5 4	14	16	10
		83	7	9	1 3 1	84	10	10

Description of Workmen.	Number of Men.	Wages Paid.			Allowance for Lodging.			Total.			Number of workmen in 1696.
		£	s.	d.	£	s.	d.	£	s.	d.	
Riggers	42	285	10	1	....			285	10	1	
Scavermen	17	121	14	4	....			121	14	4	
Labourers	250	1,009	3	4	....			1,009	3	4	
Quarter boys	12	27	3	2	1	5	3	28	8	5	
Oakum boys	25	47	13	5	3	1	0	50	14	5	
Pitch-heaters	2	11	9	1	....			11	9	1	
Blockmakers	3	29	7	8	0	7	8	29	15	4	
Locksmith	1	9	16	7	....			9	16	7	
Servant to ditto	1	3	19	0	....			3	19	0	
		13	15	7	....			13	15	7	
Sawyers	43	379	12	8	....			379	12	8	
Oar maker	1	9	7	0	....			9	7	0	

There were no smiths at this time; and it has been stated that that class of artificers formed no part of the establishment till the year 1726.

Until April, 1696, no order prevailed as to the number of either foremen or quartermen that should be employed in this dockyard. Their wages had been recently increased; and the next thing affecting them was to determine the numbers that should be employed. On the 1st of the above month, the Navy Board therefore directed that there should be "4 foremen, namely, 2 for the old works, 1 for the works afloat, and 1 for the caulkers; and that 1 quartermen for a leading man should be allowed to every 20 shipwrights and caulkers."

The number of artificers increased considerably with the importance of the dockyard, in the early part of the 18th century, and in 1734, the number of shipwrights was 600; in 1778, there were 846 shipwrights.

The following table will show how the number of this and some other classes of artisans have varied at different intervals since the breaking out of the War of the Revolution:—

Date.	Number of			
	Shipwrights.	Caulkers.	Joiners.	Smiths.
1792.....	787	114	55	68
1797.....	1,070	160	90	106
1810.....	1,230	134	123	149
1820.....	1,070	102	142	160
1830.....	830*	90	83	153
1840.....	780*	69	108	162

* Including Inspectors.

Number of
workmen in
1850.

In the year 1850, the establishment included the following artificers and other workmen, of the respective ages marked in the columns:—

Description of Workmen.	Estab- lished Comple- ment.	Ages.					Total.
		15 to 25 Years.	25 to 35 Years.	35 to 45 Years.	45 to 55 Years.	55 to 65 Years.	
Shipwrights	810	211	222	150	93	134	810
Blockmakers	4	....	....	....	3	1	4
Oar maker	1	....	....	....	....	....	1
Caulkers	80	33	23	8	11	14	89
Joiners.....	134	5	56	46	14	16	137
Cooper.....	1	....	1	....	....	....	1
Bricklayers	2	....	....	2	....	....	2
Sawyers	100	2	64	19	6	9	100
Painters	35	....	14	14	7	....	35
Labourers	200	35	122	28	4	11	200
„	200	36	93	52	19	....	200
Millwrights and workmen employed with them	61	9	16	15	10	10	60
Smiths.....	180	28	78	47	24	2	179
Block mills	60	15	15	12	6	12	60
Plumbers, braziers, and tin- men	13	1	5	6	1	3	16
Apprentices at mathematical school	16	16	....	....	....	....	16
Total in Master Shipwright's department	1,897						
Single stationed men	17	1	2	3	11	...	17
Riggers	113	....	42	46	8	17	113
Seamen for yard service	125	5	40	23	1	....	69
Sailmakers	58	14	13	8	6	13	54
Spinners	104	23	45	30	12	10	120
Storehouse men	18	....	4	5	5	5	19
Messengers	7	....	1	....	1	5	7
Colour women.....	7	....	2	....	5	....	7
Police	91	2	45	29	11	4	91
Workmen at steam factory....	462	95	233	121	12	1	462
Staff of dockyard battalion, including Adjutant	15	....	....	7	8	....	15
<i>Extra Workmen at Ropery.</i>							
Ropemakers.....	38	55	25	8	6	2	96
Labourers	38						
House boys	20						
<i>Under Director of Works.</i>							
Foreman	1	1	3	6	1	....	11
Overseers.....	2						
Draughtsmen	1						
Assistant ditto.....	1						
Messenger	1						
Labourer	1	1	....	....	....	1	
Temporary clerk and writer....	1						
Assistant at telegraph.....	1						
Seamen for yard service afloat	89	9	33	27	12	8	89

It has been already remarked that the duties of this dockyard consist to a greater extent of repairing and fitting out ships than in building them. The preponderance of duties in this way is, of course, greater in a time of war than in a time of peace; and there may be, as there has been, an exception to this, and the duties of building exceed those of repairing, &c.

Still, in time of war, the pressure of duties connected immediately with ships in commission has been so great as to oblige the suspension of new work altogether; thus it was during the two years 1797 and 1798. The different descriptions of employment of the shipwrights will be presented with sufficient clearness in the following table, which embraces eleven consecutive years during war, and five years at intervals of about ten years apart, with the exception of the first of these years, during peace.

This table will show what class of duties gives the establishment its importance in time of war.

A Table of the respective Employments of Shipwrights, showing the Number of Days' Work for one man, and also the Amount of Absence from Duty of the Men, on account of Sickness and Hurts, with Leave of Absence, and without Leave, during the Years therein expressed.

Date.	Build- ing.	Repair- ing.	Number of Days em- ployed in Repairing, for one Day employed in Building.	In the Mast House.	In the Boat House.	Capstan House, Top House, and Single Stations	Absent through Sick- ness. &c.	Absent with Leave.	Absent with- out Leave.	Total Working Days for the Year.
1791	10,764	151,274	14.00	27,954	31,698	13,614	13,596	694	2,628	252,122
1792	15,660	149,928	9.50	24,468	22,890	17,334	13,918	468	2,384	247,350
1793	6,418	154,994	24.00	40,716	24,228	20,046	2,862	246	2,508	252,018
1794	5,694	156,360	27.00	43,782	29,160	20,340	3,648	366	2,340	261,600
1795	2,694	155,226	57.00	54,564	32,100	20,680	6,174	246	3,288	275,172
1796	1,524	152,282	99.90	62,076	41,868	25,860	4,722	228	3,546	292,206
1797	..	182,724	..	44,460	49,650	30,408	5,260	600	5,076	318,078
1798	..	168,618	..	63,006	41,424	26,586	5,016	288	4,974	309,912
1799	3,204	178,740	55.78	60,630	43,860	25,302	3,930	636	4,950	321,262
1800	3,642	171,426	47.00	63,210	44,082	24,606	3,486	432	4,278	315,162
1801	3,804	181,938	21.90	53,568	46,134	24,558	3,432	384	5,214	322,914
1810	13,920	246,390	17.70	37,896	22,156	41,564	4,866	1,164	7,468	374,424
1820	48,456	220,972	4.50	27,498	23,796	9,240	3,186	882	2,408	336,438
1830	172,974	37,266	0.21	19,830	12,090	10,188	4,932	852	822	258,954
1840	33,903	143,244	4.20	23,232	12,948	16,239	5,820	1,002	828	237,216
1849	54,241	156,868	2.89	19,561	12,581	16,001	8,094	1,356	644	269,336

Total Number of Days for One Man in 16 Years. . . . 4,644,244

The preceding table exhibits the amount of time lost by the workmen without leave, in relation to their whole working time; and as this is, to a great extent, a fair index to the discipline which prevails, the following statement has been deduced from the table:—

The workmen lost—

In 1791 one day in 95 days.

1792 " 103 "

1793 " 100 "

1794 " 111 "

1795 " 83 "

1796 " 82 "

1797 " 62 "

1798 " 62 "

In 1799 one day in 65 days.

1800 " 73 "

1801 " 62 "

1810 " 50 "

1820 " 139 "

1830 " 315 "

1840 " 286 "

1849 " 418 "

Time lost by
workmen.

Time lost by
workmen.

It appears, therefore, that during the first year after the war of which notice is taken in this account, the time absented from labour without leave was diminished to nearly one-third of what it had been in 1810. In 1830, the time lost from work without leave was still further diminished; but at that time the artificers were employed only five days in the week. In 1840, when they worked six days in the week, the lost time was inconsiderably increased; but in 1849, it was far less than in any preceding year included in this table. Thus it appears that the attendance of the men at their duties has been brought within these few years to a far higher degree of punctuality than it has ever risen to before; and this is clearly associated with the measures which have been in operation tending to the moral improvement of the establishment. Of this improvement, too, there are other evidences, as complaints of conduct in any way constituting a breach of order or discipline are now of rare occurrence.

Although the labour of repairing and fitting out ships generally exceeds that of building them, yet in a time of peace there is no considerable amount of building performed in this yard. The proportions of new and old work will perhaps be a little further exemplified by the following table, showing what ships have been built in this yard during the present century, and a statement of the number of ships docked:—

Ships built
during the
present cen-
tury.

Name.	Guns.	Tons.	Date.	Name.	Guns.	Tons.	Date.
Neptune.....	120	2,705	1832	<i>Corvettes, Sloops,</i>			
Queen	110	3,104	1839	<i>&c.</i>			
Princess Charlotte	104	2,417	1825	Volage	26	516	1825
Boyne (afterwards	104	2,155	1810	Brazen	26	422	1808
Excellent)				Tweed	26	500	1823
Dreadnought	104	2,123	1801	Challenger	26	603	1826
Bellerophon	78	2,056	1818	Sapphire	26	605	1827
Indus	78	2,098	1839	Martin	20	400	1821
Bulwark.....	76	1,940	1807	Hermes	20	512	1811
Carnatic.....	74	1,819	1823	Champion.....	18	455	1824
Pitt	74	1,751	1809	Columbine	18	492	1826
Vindictive	74	1,758	1813	Electra	18	462	1837
				Favourite	18	432	1829
				Grasshopper.....	18	368	1813
<i>Frigates.</i>				Hazard	18	431	1837
President	50	1,537	1829	Orestes	18	459	1824
Leander	50	1,987	1848	Primrose	18	383	1810
Grampus	50	1,114	1802	Rose	18	398	1821
Fox	46	1,063	1829	Wolf	18	454	1826
Minerva	46	1,082	1820	Childers	18	384	1812
Thalia	46	1,082	1830	Albatross	16	484	1842
Lacedemonian	46	1,073	1812	Bittern	16	484	1840
Pallas	42	951	1816	Frolic	16	509	1842
Pyramus	42	920	1810	Grecian.....	16	484	1838
Laurel	42	1,088	1813	Podargus	14	252	1808
Inconstant	36	1,422	1836	Zephyr	14	253	1809
Alexandria.....	32	662	1806	Racer	12	431	1833
				Daring	12	426	1844
<i>Corvettes, Sloops,</i>				Osprey	12	425	1844
<i>&c.</i>				Icarus	10	234	1814
Eurydice	26	921	1843	Jasper	10	235	1820
Actæon	26	620	1831				

Name.	Guns.	Tons.	Date.	Name.	Guns.	Tons.	Date.	Ships built during the present century.
Lynx	10	232	1833	Cygnets	6	235	1819	
Myrtle	10	230	1825	Prince Regent	Yacht	282	1820	
Rapid	10	319	1840	Arrow	Cutter	157	1823	
Plover	10	237	1821	Sylvia	Cutter	65	1827	
Pantaloon	10	323	1831	Seaflower	Cutter	116	1830	
Ferret	8	358	1840	Fanny	Cutter	136	1831	
Sealark	8	319	1843					

To the preceding list, which includes the names of sailing-ships and vessels only, must be added the names of steam-ships and vessels:—

Name.	Guns.	Horse-Power.	Tons.	Date.
Arrogant (<i>screw</i>)	46	360	1,862	1848
Dauntless (<i>screw</i>)	33	520	1,496	1847
Centaur	6	540	1,270	1845
Firebrand	6	400	1,190	1842
Scourge	6	420	1,124	1844
Driver	6	280	1,056	1840
Thunderbolt	6	300	1,055	1842
Stromboli	6	280	967	1839
Furious	16	400	1,286	1850
Hermes	6	220	830	1835
Argus	6	300	975	1849
Volcano	3	140	720	1836
Rifleman (<i>screw</i>)	8	100	483	1846
Plunper (<i>screw</i>)	12	60	489	1848

The number of ships and vessels taken into dock for repairs during the six years from 1805 to 1810, inclusive, were 69, 67, 70, 77, 61, and 82, respectively, which gives a mean of 71 ships and vessels docked for repair in each year. More than two-thirds of these were in commission, having been generally sent home to undergo such repairs as were absolutely necessary. The others were taken from a state of ordinary, repaired, and put into commission.

In the year 1851, there were about fifty-eight ships and vessels taken into dock, nearly two-thirds of which, whether sailing-vessels or steamers, were sloops and smaller vessels; and as this number is relatively high for a time of peace, it is proper to state that the greater employment of steamers within these few years has given occasion to a great increase of docking, without a proportionate increase of repairs.

Since the native forests of this country have failed of yielding a supply of timber adequate to the wants of the navy, oak and other descriptions of timber have been procured elsewhere, first on the continent of Europe and in North America, and more recently also in Africa, the East and West Indies, and South America, and in the colonial parts of the empire in the more southern regions. The following table will show the quantities and descriptions of timber that were used in this yard in the years 1820, 1830, 1840, and 1849:—

Ships docked for repair.

Supply of ship timber.

Description of Timber.	1820.			1830.			1840.			1849.		
	Timber.	Thick Stuff.	Plank.	Timber.	Thick Stuff.	Plank.	Timber.	Thick Stuff.	Plank.	Timber.	Thick Stuff.	Plank.
	Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	Loads.
Oak.—English	6,760	459	673	2,783	168	294	1,359	264	256	1,609	602	213
„ Dantzic .....	..	86	484	..	36	517	..	108	220	..	171	186
„ Foreign, not Dantzic.....	1,771	..	..	..	73	308	..	16	188	..	..	..
„ Adriatic .....	..	91	173	961	..	..	464	..	..	1,295	91	25
„ Lorraine and French .....	..	..	..	24	..	..	31	..	..	..	..	..
„ African .....	..	..	2	1,065	..	..	1,080	..	..	737	8	57
Teak and other Foreign, not oak	716	29	22	..	134	..	..	86	..	..	..	..
Teak .....	..	196	35	135	..	..	12	..	..	275	71	47
Mahogany .....	..	..	..	..	..	..	..	..	..	394	37	72
Sabicu .....	..	..	..	..	..	..	..	..	..	153	..	7
Cedar .....	..	..	..	..	..	..	73	..	..	56	..	2
Fir.—Dantzic.....	111	..	..	612	..	..	310	..	..	264	..	..
„ Red Pine	2,318	..	..	993	..	..	318	..	..	447	..	..
„ Yellow Pine....	298	..	..	138	..	..	78	..	..	336	..	..
„ Pitch Pine.....	12	..	..	..	..	..	..	..	..	183	..	..
„ Riga	718	..	..	965	..	..	292	..	..	44	..	..
„ of sorts .....	..	41	273	..	83	612	..	121	450	..	66	608
Larch.—Polish .....	..	..	..	..	..	..	330	..	..	51	..	..
„ Italian .....	..	..	..	..	..	..	..	..	..	10	..	..
Chwdie (from New Zealand) .....	..	..	..	..	..	..	2	..	..	..	..	..
Elm.—English	989	..	138	681	113	78	1,073	63	59	883	42	154
„ Canada Rock ..	..	..	..	..	..	..	143	11	59	120	6	96
Beech	71	..	22	76	..	4	89	..	27	52	..	..
Ash	28	..	..	19	..	..	3	..	..	21	..	..
Total in each year..	13,792	902	1,822	8,452	607	1,813	5,657	669	1,259	6,930	1,094	1,466
Mast Sticks of all descriptions	No. 3,631			No. 2,873			No. 2,455			No. 3,013		
Deck Deals, 30 ft. lengths	5,879			3,980			2,943			2,452		
Ordinary Deals, 12 ft. lengths	15,030			19,060			20,888			13,119		
Treenails of all descriptions	201,520			161,805			66,451			89,385		
Ash Oar-Rafters	3,281			2,383			489			2,536		
Capstan Bars	454			204			283			296		

Statement of the Number of Deaths amongst the Workmen and Police Constables of the Dockyard, and whether occasioned by Sickness or by Accidents, from the 1st July, 1838, to the 30th June, 1850.

	Ship-wrights.		Caulkers.		Meal Mills and Mill-wrights.		Smiths.		Join-ers.		Sail-makers.		Rope-makers.		Sawyers.		Painters.		Seamen and Riggers.		Masons and Labourers.		Factory People.		Police Constables.		Total in each Year.	
	Sickness.	Hurts.	Sickness.	Hurts.	Sickness.	Hurts.	Sickness.	Hurts.	Sickness.	Hurts.	Sickness.	Hurts.	Sickness.	Hurts.	Sickness.	Hurts.	Sickness.	Hurts.	Sickness.	Hurts.	Sickness.	Hurts.	Sickness.	Hurts.	Sickness.	Hurts.	Sickness.	Hurts.
From July 1st to Dec. 31st, 1838	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	4	..	..	..	..	..	..	..	5	..
From Jan. 1st to Dec. 31st, 1839	8	..	..	..	1	..	5	..	1	..	1	..	..	1	2	1	..	..	2	..	1	..	..	..	..	..	21	2
From Jan. 1st to Dec. 31st, 1840	5	..	..	..	..	..	1	..	2	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	11	2
From Jan. 1st to Dec. 31st, 1841	3	2	..	..	2	..	1	..	1	..	..	..	..	..	1	..	..	..	8	..	2	..	..	..	1	..	16	2
From Jan. 1st to Dec. 31st, 1842	5	..	..	..	1	..	2	..	2	..	..	..	1	..	1	..	..	..	1	..	1	..	..	..	..	..	14	..
From Jan. 1st to Dec. 31st, 1843	4	..	..	..	..	..	3	..	1	..	..	..	..	..	3	1	..	..	..	..	3	1	..	..	..	..	14	1
From Jan. 1st to Dec. 31st, 1844	5	1	2	1	..	..	1	..	3	..	1	..	2	..	3	..	..	..	1	..	1	..	..	..	1	..	19	4
From Jan. 1st to Dec. 31st, 1845	8	3	..	..	..	..	2	..	2	..	2	..	2	..	..	..	..	..	2	1	3	..	..	..	1	..	23	4
From July 1st to Dec. 31st, 1846	9	..	..	..	..	..	1	..	..	..	..	..	2	1	..	1	2	..	..	..	2	1	..	..	..	..	16	3
From Jan. 1st to Dec. 31st, 1847	10	..	1	..	1	..	..	..	1	1	..	..	3	..	1	..	2	..	1	..	4	1	..	..	..	..	24	2
From Jan. 1st to Dec. 31st, 1848	7	..	..	..	..	..	1	..	2	..	1	..	6	..	1	..	1	..	1	..	9	..	3	..	..	..	32	..
From Jan. 1st to Dec. 31st, 1849	10	1	..	..	..	..	1	..	..	..	..	..	3	..	1	..	..	1	1	1	10	..	1	..	1	..	29	2
From Jan. 1st, to June 30th, 1850	5	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	1
Total	79	7	4	1	5	1	18	..	16	1	6	..	-22	2	13	2	5	..	16	2	37	3	4	..	3	2	230	23

Dockyard
officers.

The dockyard includes the following officers :—A superintendent, who is a rear-admiral, and who holds his appointment for a term of five years; a master attendant and an assistant master attendant, both of whom are masters in the navy, and who hold their appointments for a term of five years. These officers are charged with the care of all the ships afloat in the harbour, as to the efficiency of their moorings, and with the stowage and rigging of all ships fitted out for sea. A master shipwright and four assistants, two of whom are shipwright officers, a third is an engineer, who is charged with the superintendence of the machinery in his department, the fourth is a chemist, to whom duties are referred as they present themselves, and whose office included also the preparation of a half-yearly report on copper sheathing in the navy, and the delivery of lectures on chemistry to the officers of the yard and to the students at the central school. There are six foremen of the yard, and twelve inspectors. There are a foreman of joiners and two inspectors. Connected with the smithery, are a master smith and two foremen of smiths. There are also a storekeeper and a store-receiver, who are charged with the receipts, custody, and issue of stores. There is a timber inspector, under whose supervision is placed directly all the timber in charge of the storekeeper of the yard.

There is a chief engineer and inspector of machinery connected with the steam factory, and an assistant engineer; and there is a captain of the Royal Engineers in charge of architectural works in the establishment.

The clergyman attached to the yard is a naval chaplain, and the surgeon and assistant surgeon are also naval officers, as likewise is the director of police.

Clerks.

There are 29 clerks in the dockyard, viz., 3 first class, 9 second class, and 17 third class clerks.

Foremen, in-
spectors, and
leading men.

The supervision of labour in the master shipwright's department was altogether *direct* until the year 1847; that is, the work was performed under the general superintendence of foremen of the yard, and more directly under officers of inferior rank, called inspectors, who were charged with the management of a company; and this company was divided into gangs, at the head of each of which was a leading man. In April, 1847, the labour of this department was put under a new supervision, partly *direct* and partly *indirect*. The number of inspectors was diminished from 21 to 12; their salaries were increased at the same time, and a system of *partial measurements* of work was introduced, constituting the *indirect* supervision. For this purpose, four officers were appointed, under the denomination of measurers, whose salaries amount to about the sum saved by reducing the number of inspectors.

Measurers.

These officers no sooner organised their departments and entered upon its duties, than it was ascertained, as had been already suspected, that there was a serious deficiency in the earnings of the workmen in relation to their wages. The average deficiency of earnings shown in a number of the earliest measurements was about 10 per cent. When the amount of wages was found not to have been earned, the workmen were paid only the exact amount of their earnings, and this mode of checking their exertions soon proved completely effective; the energies of the men were honestly given to their duties; and their earnings

since that time have generally exceeded their wages at the rate of about 3 per cent., which, added to the previous amount of deficiency, makes about 13 per cent. increase of work performed by the men through an improved supervision of their labour; and in this way a saving is effected in this dockyard of more than 11,000*l.* annually.

Connected with this class of duties, a new system of accounts has been framed, with the view no less effectually to check the expenditure of materials, than occasional and partial measurements have checked the performance of labour. This system is still in the course of development, and so far as any inference can yet be drawn of the results to which it may lead, in the event of its being applied with integrity and zeal, it is expected that it will be productive of economy in the use of materials as satisfactorily as have been the results of measuring work. When the accounts have been kept long enough to obtain the requisite data of the actual cost of work in all its branches and in sufficient detail, a general standard may be formed much surer than any yet set up for the expense of any descriptions of work. The detail of these accounts is so extensive, without being cumbrous, that the expense in materials and workmanship can be readily shown of work performed, not only in building a ship in the gross, but also of the work performed in different stages, from the commencement up to the completion of the ship. A general comparison of different ships can by this means be easily made; the cause of any discrepancy in their expense be traced, and extravagance, where any exists, can likewise be readily traced, and responsibility be made to attach to any officer who might in that respect be in fault.

In particular sections of this department, the accounts have already been brought to a very mature state, as in the mast-house, joiners' shop, and smithery, where the works are on a scale that admits of their being performed in a short time. The long intervals between the beginning and finishing of ships, being sometimes a considerable number of years, will, however, require proportionably longer time to render the accounts relating to them so complete as to constitute the means of checking all expenditure of materials along with the performance of workmanship.

Population.

Population of Portsmouth and Portsea, according to the Census Returns, from 1801 to 1841 (both inclusive).

Year.	Portsmouth.			Portsea.			Grand Total.	Increase per Cent.
	Males.	Females.	Total.	Males.	Females.	Total.		
1801	....	....	7,839	11,696	13,691	25,387	33,226	} 22·1
1811	....	....	....	....	....	....	40,567	
1821	....	....	....	....	....	....	45,648	} 12·5
1831	....	....	8,083	18,555	23,751	42,306	50,389	
1841	5,015	4,339	9,354	19,567	24,111	43,678	53,032	} 10·4
								} 5·2

Country in which the Persons enumerated in the Returns for 1841 were born.

England.				Scotland.		Ireland.		British Colonies.		Foreigners and British Subjects born in Foreign Parts.		Not Specified.		Total.
In the County of Southampton.		In other Counties.												
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
17,412	22,847	5,302	4,877	983	198	559	378	6	5	274	93	46	52	53,032

Table showing the Extent of each Parish; the Number of Houses Inhabited, Uninhabited, and Building, in June, 1841, and the Number of Inhabitants—distinguishing those under 20 Years of Age from those of 20 Years and upwards, and those Born in the County from those Born elsewhere.

Parish.	Area in Acres.	Houses.			Inhabitants.		
		Inhabited.	Uninhabited.	Building.	Males.	Females.	Total.
Portsmouth	110	1,184	95	2	5,015	4,339	9,354
Portsea.....	4,980	8,702	676	41	19,567	24,111	43,678
Total ...	5,090	9,886	771	43	24,582	28,450	53,032

Parish.	Ages.				Born in	
	Under 20 Years.		20 Years and upwards.		This County.	Elsewhere.
	Males.	Females.	Males.	Females.		
Portsmouth	1,821	1,628	3,194	2,711	5,549	3,805
Portsea.....	8,988	9,983	10,579	14,128	34,710	8,968
Total....	10,809	11,611	13,773	16,839	40,259	12,773

From the above table it appears that the number of persons not born in the county, but residing within the limits of the borough when the census was taken, bears to the number of those born in the county the proportion of 24 per cent., which can scarcely be called excessive, considering that Portsmouth is a sea-port, a naval arsenal, and a garrison. The returns furnish the following particulars :—

In the town of Portsmouth—		Hamlet of Copnor	141
Inhabitants	6,535	" Fratton	233
Military	1,755	" Milton.....	235
Other persons in the barracks } and military hospitals	410	Military	147
In Portsmouth workhouse	132	Other persons in the barracks } and fort	71
In Portsmouth gaol	61	On board the "Leviathan," } convict hulk	629
Residing in the parish, without } the walls	461	In Portsea workhouse	511
In the town of Portsea—		In the Female Penitentiary	13
Inhabitants	13,999	In the Polish Refugee Hospital	89
Landport, Southsea, and the } district formerly known as } Portsea Guildable	27,610	Total.....	53,032

The excess of females over males amounts to 15·7 per cent. This proportion is undoubtedly affected by the peculiar position of Portsmouth as a sea-port, many of the females therein enumerated being the wives and daughters of individuals who were at sea when the census was taken. It is, however, remarkable, that in Gosport, situated on the western side of Portsmouth harbour, and with the parish of Alverstoke (of which it forms a part), included by the Registrar-General in the same district with the borough of Portsmouth, the returns of the census of 1841 indicated an excess of males over females in the proportion of 21·6 per cent., the numbers being respectively 4,864 and 3,998. The proportion of males under 20 years of age to the whole number of males in the borough of Portsmouth, is 43·9 per cent.

Classification of the Inhabitants of the Borough of Portsmouth, according to Age, June, 1841.

Age.	Males.	Females.	Total.
Under 5 years of age	3,068	3,000	6,068
5 years and under 10	2,869	2,919	5,788
10 " " 15	2,619	2,782	5,401
15 " " 20	2,253	2,910	5,163
20 " " 25	2,467	3,258	5,725
25 " " 30	1,877	2,534	4,411
30 " " 35	1,724	2,098	3,822
35 " " 40	1,224	1,502	2,726
40 " " 45	1,239	1,653	2,892
45 " " 50	960	1,265	2,225
50 " " 55	1,307	1,391	2,698
55 " " 60	874	856	1,730
60 " " 65	854	864	1,718
65 " " 70	481	501	982
70 " " 75	399	466	865
75 " " 80	190	246	436
80 " " 85	110	128	238
85 " " 90	29	48	77
90 " " 95	13	18	31
95 " " 100	3	5	8
100 years and upwards .....	....	1	1
Not specified	22	5	27
Grand Total.....	24,582	28,450	53,032

*Classification of the Population of the Borough of Portsmouth,
June, 1841.*

Occupation.	Males.		Females.		Total.
	20 Years and upwards.	Under 20 Years.	20 Years and upwards.	Under 20 Years.	
Persons engaged in trade, commerce, and manufactures	5,699	646	954	177	7,476
Persons engaged in agriculture—					
Farmers and graziers	29	....	1	....	30
Agricultural labourers	229	38	12	4	283
Gardeners, nurserymen, and florists	77	5	2	....	84
Labourers—					
Carriers, carters, and waggoners	16	4	....	....	20
Charwomen .....	....	....	156	8	164
Grooms and hostlers	23	3	....	....	26
Porters	43	18	....	....	61
Seamstresses .....	....	....	430	127	557
Washerwomen and laundresses .....	....	....	238	5	243
Not otherwise specified	1,345	135	18	1	1,499
Army	1,193	234	....	....	1,427
,, half-pay	8	....	....	....	8
Navy	611	38	....	....	649
,, half-pay	52	....	....	....	52
Marines	598	97	....	....	695
Seamen	667	62	....	....	729
Harbour-master	1	....	....	....	1
Pilots	21	....	....	....	21
Boatmen	146	7	....	....	153
Fishermen	85	8	....	....	93
Professional persons—					
Clergymen and divinity students	19	....	....	....	19
Ministers of other denominations	23	....	....	....	23
Legal—Attornies, solicitors, and } law students	42	1	....	....	43
Conveyancer	1	....	....	....	1
Notary	1	....	....	....	1
Medical—Physicians	3	....	....	....	3
Surgeons and medical } students	54	8	....	....	62
Other educated persons—					
Clerks	112	23	2	....	137
Schoolmasters and governesses	51	....	122	11	184
Teachers of languages	24	....	2	2	28
Government civil service—					
Dockyard	30	1	2	....	33
Customs and excise	65	....	....	....	65
Post office	18	....	....	....	18
Stamps and taxes	2	....	....	....	2
All other departments	5	....	....	....	5
Parochial and church officers	14	....	....	....	14
Law officers	2	....	....	....	2
Police officers, constables, and watch- men	72	....	....	....	72
Domestic servants	156	101	1,389	588	2,234
Carried forward	11,537	1,429	3,328	923	17,217

Classification of the Population of the Borough of Portsmouth, June, 1841.—
Continued.

Occupation.	Males.		Females.		Total.
	20 Years and upwards.	Under 20 Years.	20 Years and under.	Under 20 Years.	
Brought forward	11,537	1,429	3,328	923	17,217
Nurses .....	....	....	45	1	46
Stewards	4	....	....	....	4
Other persons employed in trade, } branch not specified	26	41	11	1	79
Persons returned as independent	399	22	1,726	100	2,247
Almspeople, pensioners, paupers, } lunatics, and beggars	766	118	293	119	1,296
Other persons, including convicts and } prisoners	580	61	17	8	666
Residue of population	461	9,138	11,419	10,459	31,477
Grand Total	13,773	10,809	16,839	11,611	53,032

Abstract of the Classification of Persons Enumerated in the Borough of
Portsmouth, June, 1841.

Occupation.	Males.		Females.		Total.
	20 Years and upwards.	Under 20 Years.	20 Years and upwards.	Under 20 Years.	
1. Persons engaged in trades, com- } merce, and manufactures	5,725	687	965	178	7,555
2. Persons engaged in agriculture	335	43	15	4	397
3. Labourers in other departments	1,427	160	842	141	2,570
4. Army, including half-pay	1,201	234	....	....	1,435
5. Navy, including half-pay, marines, } merchant-seamen, fishermen, } and boatmen	2,181	212	....	....	2,393
6. Professional persons—					
Clerical	42	....	....	....	42
Legal	44	1	....	....	45
Medical	57	8	....	....	65
7. Other educated persons	187	23	126	13	349
8. Persons engaged in the Govern- } ment civil service	120	1	2	....	123
9. Parochial, town, and church offi- } cers	88	....	....	....	88
10. Domestic servants	160	101	1,434	589	2,284
11. Persons returned as independent	399	22	1,726	100	2,247
12. Almspeople, pensioners, paupers, } lunatics, and beggars	766	118	293	119	1,296
13. Other persons, including convicts } and prisoners	580	61	17	8	666
Residue of population	461	9,138	11,419	10,459	31,477
Grand Total	13,773	10,809	16,839	11,611	53,032

In the preceding abstract, under the head of "Trade and Commerce," not only the shopkeepers and masters are included, but all those who have returned themselves as engaged in the several branches; from which the following may be selected, inasmuch as they indicate the nature of the occupations which more particularly characterise the borough. The greater number of persons under the respective denominations are employed in her Majesty's dockyard.

Occupation.	20 Years and upwards.	Under 20 Years.	Occupation.	20 Years and upwards.	Under 20 Years.
Blacksmiths	234	28	Sawyers	172	4
Carpenters and joiners	455	62	Ship builders and car- } penters..... }	766	56
Painters, glaziers, and } plumbers	167	24	Caulkers	63	16
Rope and cord spinners	174	9	Riggers	41	....

The total 31,477, under the head of "Residue of the Population," comprises both sexes and all ages, as in the general return for the kingdom. Of this number, the proportion of males 20 years of age and upwards is 1·46 per cent. For the remainder, the following are the proportions:—Males under 20 years of age, 29·46 per cent.; females 20 years of age and upwards, 36·8 per cent.; females under 20 years, 33·7 per cent.; whilst for the whole kingdom, the proportions under the same heads are:—Males 20 years of age and upwards, 2·5 per cent. of the whole number; and of the remainder, the respective proportions are about 31, 32, and 33 per cent.

Quarterly Returns of Marriages, Births, and Deaths, for the Year 1841.

	Quarters ending				Total.
	March 31.	June 30.	Sept. 30.	Dec. 31.	
<i>Marriages.</i>					
Portsea island	86	173	246	220	725
<i>Births.</i>					
Portsmouth town	60	43	49	52	204
Portsea town	116	106	109	105	436
Kingston and Landport	100	97	95	90	382
Landport and Southsea ...	190	137	138	129	594
Total	466	383	391	376	1,616
<i>Deaths.</i>					
Portsmouth town	55	44	67	67	233
Portsea town	96	80	72	83	331
Kingston and Landport ...	105	56	55	74	290
Landport and Southsea ...	100	71	87	100	358
Total	356	251	281	324	1,212

Gaol.

The Gaol and House of Correction is under the jurisdiction and superintendence of the mayor and magistrates of the borough. The officers are, the gaoler, chaplain, surgeon, matron, and two turnkeys. The two first named are appointed by the mayor, the others by the mayor and magistrates.

General Statement of the Progress of the Committals and Offences, from the Year 1803 to 1830, accompanied with references to the state of the Population and the circumstances of the times. Extracted from the Third Report of Inspectors of Prisons to the Secretary of State, dated 31st March, 1833.

Period. (The Year ending at Michaelmas.)	Felonies.						Misdemeanours.						For Punish- ment by Courts Mar- tial.	Greatest Num- ber of Pri- soners at one time.	Total Num- ber Com- mit- ted.	Remarks.
	Committals.			Con- victed.	Trans- ported.	For the As- saults.	Committals.			Con- victed.	Trans- ported.					
	For Examination.		For Trial at the Sessions.				For Examination and on Summary Process.		For Trial at the Sessions.							
	Males.	Fem.					Total.	Males.				Fem.					Total.
1803.....	147	68	215	83	47	12	274	114	388	9	2	22	...	...	625	War with France. { Many deserters from the { Navy & disorderly women.
1804.....	111	80	191	57	27	7	726	246	972	9	3	24	...	...	1,187	
1805.....	149	91	240	49	26	5	598	146	744	3	2	32	...	...	1,016	
1806.....	93	79	172	48	31	4	374	223	597	6	6	10	...	...	809	
1807.....	108	63	171	55	23	...	416	235	651	20	6	16	...	...	838	
1808.....	114	63	177	60	40	11	357	114	471	1	...	...	...	...	677	
1809.....	113	32	145	71	48	10	344	126	470	12	...	36	...	...	651	New gaol occupied.
1810.....	89	55	144	50	34	4	244	125	373	13	2	34	...	...	532	
1811.....	90	46	136	55	37	2	248	125	373	12	6	36	...	...	545	
1812.....	152	51	203	91	63	9	266	85	351	14	9	38	...	...	592	
1813.....	145	63	208	83	49	10	292	98	350	25	15	43	...	...	626	
1814.....	146	74	220	90	58	8	292	142	344	18	7	52	...	...	671	Peace with France.
1815.....	179	64	243	73	55	12	418	176	594	18	10	58	...	...	947	
1816.....	118	53	201	69	43	7	311	131	442	18	10	45	...	...	697	
1817.....	163	54	217	87	64	7	194	47	241	11	8	73	...	...	548	
1818.....	136	43	179	57	43	8	269	39	308	11	8	9	...	...	539	
1819.....	119	43	161	68	51	...	226	49	275	12	6	31	...	...	483	
1820.....	118	42	161	70	48	6	236	44	280	8	5	25	...	...	486	
1821.....	107	33	140	61	41	11	208	29	237	15	10	15	...	...	410	
1822.....	100	38	138	61	44	5	214	82	296	20	10	28	...	...	471	
1823.....	76	23	99	47	32	8	238	79	317	36	17	30	...	...	454	
1824.....	102	49	151	73	41	11	207	45	252	12	5	38	...	...	434	
1825.....	117	50	167	73	45	8	180	60	240	10	3	35	...	...	446	
1826.....	67	23	90	46	31	5	236	65	301	20	11	45	...	...	436	
1827.....	96	30	126	54	38	8	233	45	278	21	6	63	...	...	474	{ Act passed (9 Geo. IV., { c. 31.) for trying assaults { in a summary way.
1828.....	101	39	140	62	46	11	194	59	253	29	11	29	...	...	424	
1829.....	107	38	145	66	42	12	203	38	241	8	4	51	...	...	487	
1830.....	120	40	160	86	72	19	196	53	249	8	4	25	...	...	434	
Total.....	3,313	1,427	4,740	1,844	1,220	225	8,064	2,795	10,859	397	189	4	1,037	263	16,899	
Maximum.....	179	91	243	90	72	19	726	246	972	36	17	73	...	...	1,187	Population 1801, 33,236.
Minimum.....	67	23	90	46	26	...	180	29	237	1	...	15	...	...	410	" 1811, 40,567.
War Average.....	127	63	190	66	41	7	259	147	506	12	...	38	...	...	744	" 1821, 45,648.
Peace Average.....	109	38	148	65	44	8	215	62	269	16	7	35	...	...	462	" 1831, 50,389.

The following details for the year 1841 are extracted from the Seventh Report of Inspectors of Prisons; the accompanying observations from the Report of the Governor of the Gaol:—

1841.—Population 53,032.

	Males.		Females.		Total.
	Adult.	Juvenile.	Adult.	Juvenile.	
Committed for trial during } the year	57	17	27	2	103
Rendered in court for trial	2	....	2	....	4
	59	17	29	2	107
These cases were thus disposed of—					
Convicted	42	14	20	1	77
Acquitted.....	6	1	3	....	10
No bills found	5	2	3	1	11
Not prosecuted	6	....	3	....	9
Total	59	17	29	2	107

Summary Convictions.

	Males.		Females.		Total.
	Adult.	Juvenile.	Adult.	Juvenile.	
By courts martial	34	....	....	....	34
Deserters awaiting a route	17	....	....	....	17
Under the Vagrant Act	17	....	16	....	33
Under the Malicious Tres- } pass Act.....	13	....	4	....	17
Under the Larceny Act	3	6	....	....	9
Under the Local Police Act	10	....	....	....	10
For assaults	19	5	9	..	33
For want of sureties	18	....	7	1	26
As known or reputed } thieves	4	6	....	....	10
Not otherwise specified	24	3	....	....	27
Total	159	20	36	1	216

Number of Prisoners in the course of the Year.

	Males.		Females.		Total.
	Adult.	Juvenile.	Adult.	Juvenile.	
In custody at the commencement of the year	11	3	13	3	30
Received under commitments	218	41	61	3	323
Committed for examination, and discharged	47	6	49	2	104
Debtors at the commencement of the year	6	....	1	....	7
Debtors in the course of the year	52	....	3	....	55
Total	334	50	127	8	519
Greatest number of prisoners at any one time in the course of the year	59		32		91
Daily average throughout the year	44		16		60

Recommittals.

	Males.		Females.		Total.
	Adult.	Juvenile.	Adult.	Juvenile.	
Once	34	6	28	1	69
Twice	13	5	10	....	28
Thrice	6	2	3	....	11
Four times or more	7	2	3	....	12
Total	60	15	44	1	120

State of Instruction of Prisoners for Trial, or Tried, at the Assizes or Sessions.

	Males.		Females.		Total.
	Adult.	Juvenile.	Adult.	Juvenile.	
Can neither read nor write	7	5	5	....	17
Can read only	9	2	7	1	19
Can read and write imperfectly	27	8	16	1	52
Can read and write well	16	2	1	....	19
Total	59	17	29	2	107

State of Instruction of Prisoners under Summary Conviction.

	Males.		Females.		Total.
	Adult.	Juvenile.	Adult.	Juvenile.	
Can neither read nor write	27	10	20	....	57
Can read only	21	7	6	1	35
Can read and write imper- fectly	40	5	6	....	51
Can read and write well	20	2	....	....	22
Not ascertained	51	....	....	....	51
Total	159	24	32	1	216

Ages of Prisoners.

	For Trial.			Under Summary Conviction.		
	Males.	Females.	Total.	Males.	Females.	Total.
Under 12 years .....	....	....	....	3	....	3
12 years and under 14	4	....	4	10	1	11
14 „ „ 17	13	2	15	11	....	11
17 „ „ 21	17	1	18	20	6	26
21 „ „ 30	23	13	36	46	14	60
30 years and upwards.....	19	15	34	42	12	54
Not ascertained .....	....	....	....	51	....	51
Total	76	31	107	183	33	216

Number of Prisoners Sentenced to Transportation.

	Males.		Females.		Total.
	Adult.	Juvenile.	Adult.	Juvenile.	
7 and under 10 years	3	1	3	1	8
10 „ 14 „	1	....	1	....	2
14 „ 15 „	1	....	....	....	1
Total	5	1	4	1	11

Number of Prisoners Sentenced by Courts of Justice.

	Males.		Females.		Total.
	Adult.	Juvenile.	Adult.	Juvenile.	
To solitary confinement	19	12	6	....	37
To be whipped publicly ....	....	....	....	....	....
„ „ privately....	....	16	....	....	16

Number of Punishments for Offences within the Prison.

	Males.		Females.		Total.
	Adult.	Juvenile.	Adult.	Juvenile.	
Handcuffs and other irons	1	....	....	....	1
Dark cells	14	3	....	....	17
Solitary cells	20	7	....	....	27
Stoppage of diet	42	13	....	....	55
Total	77	23	....	....	100

These punishments are inflicted for disobedience of the rules for the good order and discipline of the gaol.

Mode in which the Prisoners have been Employed.

	Males.		Females.		Total.
	Adult.	Juvenile.	Adult.	Juvenile.	
Hard labour	140	....	....	....	140
Employment — not hard } labour	12	15	44	2	73
Not employed	125	35	79	6	245

The prisoners returned as “not employed,” are those who were not sentenced to hard labour. The employments for the males sentenced to hard labour are the tread-mill and beating and picking oakum. Females are employed in washing, cleaning the prison, and needle-work. The following is the average scale of treadmill labour :—

Average number of working hours per day	6 hours
Height of each step	9 inches
Number of steps per minute	50 steps
Average number of feet in ascent per day	13,500 feet
Ordinary proportion of prisoners off the wheel to the total number employed	one-half
Daily amount of labour in feet of ascent performed by every prisoner	6,750 feet
Application of its power	Raising water

Cases of Lunacy, Sickness, and Death.

	Males.		Females.		Total.
	Adult.	Juvenile.	Adult.	Juvenile.	
Slight indisposition.....	118	....	42	....	160
Infirmity cases	17	....	8	....	25
Criminal lunatics .....	....	....	....	....	....
Deaths	1	....	....	....	1
Total	136	....	50	....	186
Greatest number sick at one time	7	....	6	....	13

The annual reports show that the gaol is usually in a healthy condition. Separate apartments are provided for the sick. In the year 1841, the number of prisoners the gaol was capable of containing was, when each prisoner slept in a separate cell, 47; when more than one prisoner slept in one cell, 59. The prisoners were divided into seven classes; there were eight day-rooms and seven airing-yards. Since that period, the gaol has been enlarged; twenty separate sleeping-cells and one work-room, and three airing-yards, have been added.

Each prisoner receives one pound and a half of bread and one pint of gruel per day; three-quarters of a pound of beef and one pint of soup on Fridays. Each day-room two bushels of coals per week in winter, and one in summer, and wood to light the fires. Soap, towels, razors, and combs, are allowed for the prisoners' use. Weekly cost per head, about 2s. 8d.

Each prisoner is allowed, in summer, a straw bed, a blanket, and a rug; in winter, an additional blanket. Cost per head, about 20s. Clothing per head, about 16s.

A chaplain was first appointed to the gaol in March, 1840. Morning and evening services are performed every Lord's-day, with two sermons. The chaplain attends the prisoners three times per week, two or three hours each time. Bibles, prayer-books, and other books of a moral and religious character, are provided.

Female prisoners are exclusively attended by female officers.

Abstract of Receipts and Expenditure, 1841.

	£	s.	d.		£	s.	d.
Profits of Productive Labour	14	11	0	Total cost of Prison Diet	289	5	10
Received for subsistence of Military Prisoners.....	36	8	6	Clothing	19	19	4
Received from the Exchequer for the removal of Transports	12	18	3	Bedding and Straw	22	5	7
Actual cost to the Borough.....	1,048	17	4	Extra allowances by order of Surgeon.....	6	14	5
				Fuel	54	11	10
				Soap ..	16	18	2
				Candles, Oil, and Gas	18	0	0
				Stationery, Printing, and Books	6	8	0
				Rates and Taxes	12	18	0
				Officers' Salaries:—Gaoles.....	£200	0	0
				Chaplain	100	0	0
				Surgeon	31	10	0
				Turnkey	100	0	0
				Ditto	75	0	0
				Matron	25	0	0
				Removal of Prisoners	531	10	0
				Repairs, Alterations, and Additions	27	16	6
				Sundries, not enumerated	78	12	11
					27	14	6
					£1,112	15	1

Convict Establishment.
Extract from the Report of the Convict Establishment for 1841.

Date.	Name of Hulk.	Station.	Expense.	Average Number of Convicts daily on board.	Number of Days Labour performed.	Number of Artificers employed.	Number of Labourers employed.	Rate per Diem.	Artificers' and Labourers' Earnings, separately.	Total Value of Labour performed at each Ship.
Jan. 1st to June 30th, 1841	Leviathan York	Portsmouth . Gosport	£ 4,682 9 8½ 4,834 18 0	603 599	164 152	{ 2,596 .. } { 760 .. }	78,340 ..	2 6 2 6	£ 324 10 0 5,875 10 0	{ 6,200 0 0 5,200 0 6 }
July 1st to Dec. 31st, 1841	Leviathan York	Portsmouth . Gosport	5,118 6 0½ 5,153 16 4½	630 616	157 168	{ 3,345 .. } { 785 .. }	83,706 74,539	2 6 2 6	£ 418 2 6 6,277 19 0	{ 6,696 1 6 5,688 11 0 }

Charities in the

Gift.	Date of Will.	Amount of Charity.	Devisees.	By whom the Devisees are selected.
Thomas Winter.	1679.	£200, or £10 per annum.	The Poor of the parish of Portsmouth.	Churchwardens and inhabitants of Portsmouth.
William Brandon.	Dec. 28, 1700.	£200, or £10 per annum.	The Poor of the parish of Portsmouth, who are not receiving parochial relief.	Churchwardens and inhabitants of Portsmouth.
Mr. Peck.	....	£1 per annum.	Poor of the parish of Portsmouth.	Churchwardens and inhabitants of Portsmouth.
John Timbrell.	....	£50.	Poor of the parish of Portsmouth.	Churchwardens and inhabitants of Portsmouth.
William Smith, M.D.	The school was built, with master's house attached to it, in 1732.	Grammar school. The master receives from the executors £130 per annum.	Sons of resident inhabitants of the borough of Portsmouth. The present number is 20.	A Committee appointed from time to time by the Dean and Chapter of Christ Church, Oxford; at present consisting of Vicar of Portsmouth, Vicar of Portsea, Mayor of Portsmouth, Superintendent of Portsmouth Dockyard, Head Master.
John Mounsher.	....	£100, or £5 per annum.	Poor Widows of Portsmouth, not receiving parochial relief.	Churchwardens and inhabitants of Portsmouth.
Charles West.	Dec. 2, 1765.	£100, or £3 per annum.	The Poor, and the poor House-keepers in Portsmouth, not receiving alms from the parish.	Vicar of Portsmouth.
William Pike.	Oct. 25, 1774.	£300, or £12 per annum.	Poor of the parish of Portsmouth, not in constant receipt of parochial relief.	Sir John Carter, and his executors and administrators.
		£13 10s. 6d. per annum.	The Poor of the Dissenting Meeting-house in High-street, Portsmouth.	The Minister of the Congregation.
		Alms-Houses, consisting of 10 rooms.	Old persons in the parish of Portsmouth — chiefly Widows.	Minister and Churchwardens of Portsmouth.
Thomas Mills.	£100.	Poor of the parish of Portsmouth.	Churchwardens and inhabitants of Portsmouth.

Parish of Portsmouth.

The Will of the Testator.	Executors and Trustees.	Remarks.
That the Aldermen and Burgesses of Portsmouth should distribute, yearly, on St. Thomas' Day, the sum of £10 to the Poor of the parish of Portsmouth.	Thomas Heather, Thomas Barton, Lewis Allin, Thomas Brounker, John Skinner, Joseph Voake.	This Charity is in full operation.
That the Mayor and Aldermen of the borough of Portsmouth distribute annually, on St. Thomas' Day, the sum of £10 to the Poor of the parish of Portsmouth.	The Mayor and Aldermen of the borough of Portsmouth.	The last payment was made in 1708, since which no information can be obtained respecting this Charity.
....	....	The last payment was made in 1717. It is probable that the Charity consisted of a donation for a term of years, which expired in 1717.
....	Thomas Mills, Nicholas Hedger.	The last payment with respect to this Charity was made in 1730, since which no trace of it can be found.
....	Dean and Chapter of Christ Church, Oxford.	This Charity is in full operation.
....	John Vining, Charles Bissett, Samuel Henty.	The last payment with respect to this Charity was made in 1761, since which no trace of it can be found.
That one-half be given yearly, at Christmas, to the Poor; the other half to be distributed to 30 poor House-keepers.	James Norris, Samuel Ballard, Elias Arnaud, Thomas Bartlett.	This Charity is in full operation.
To be distributed to the Poor of Portsmouth annually, on St. Thomas' Day.	....	This Charity is carried out according to the donor's will.
....	John Carter, John Norman, John Franklin.	This Charity has been left chiefly by members of the Congregation. It is in full operation.
There is no account of the Testator's will, but each occupant receives 2s. per week from the parish, with a chaldron of coals in winter.	....
....	Mayor and Aldermen.	

Charities in the

Gift.	Date of Will.	Amount of Charity.	Devises.	By whom the Devises are selected.
Thomas and Eleanor Brewer.	1666.	£3 per annum.	Poor Widows of Portsea.	Churchwardens and Overseers of the parish of Portsea.
Edward Craft.	June, 1780.	£933 6s. 8d. Reduced 3 per cent. stock.	Poor Widows', Labourers', and Artificers' Children, of the parish of Portsea, not receiving alms.	Minister and Commissioners of St. George's Chapel, Portsea, and donor's executors.
William Sheppard.	1797.	£100, or £5 per annum.	Poor Widows of the parish of Portsea.	Churchwardens, and occasionally by the inhabitants of the parish.
Richard Wilmot.	Jan. 22, 1805.	£500.	Sons of poor Widows resident in the parish of Portsea.	The executors during their lives, after which, by a majority of the trustees.
Major Ebenezer Vavasour.	1808.	£100.	Six poor Children of the parish of Portsea.	President and Steward of the Beneficial Society of Portsea.
Thomas Fitzherbert.	June 8, 1821.	£10,000.	Certain persons named in the will, and after their decease, 5 poor Men, married or single, 10 poor Widows, and 5 poor single Women, at the age of 50 and upwards, born either in the Liberty or Guildable of Portsea, resident for 10 years previous to the period of their election.	The Vicar or his Curate, the Minister of St. John's Chapel, the Minister of St. George's Chapel, the Curate or officiating Minister of each and every new Church or Chapel having cure of souls, and the Churchwardens of the Guildable part of Portsea.
Elizabeth Mary Claypit.	August, 1851.	£500.	Poor Widows of the parish of Portsea, not receiving parochial relief.	Vicar and Churchwardens of the parish of Portsea.

Parish of Portsea.

The Will of the Testator.	Executors and Trustees.	Remarks.
That Bread and Coals be distributed to the poor Widows of the parish of Portsea on St. Thomas' Day.	....	£1 on a paddock at Landport. £2 on a piece of land called Bidsclose. In consequence of a dispute, this Charity has not been in operation for some time; it is expected to be in full operation very soon.
That as many Boys as the money would allow be educated in reading, writing, and arithmetic, to fit them for trades.	Samuel Venables, William Drayton.	This Charity is in full operation.
That on Whit-Monday of every year Bread be distributed amongst such poor Widows of the parish of Portsea as the trustees shall think fit.	Churchwardens of the parish of Portsea.	This Charity is in full operation.
That 20 poor Boys be educated, for the space of three years, in the English language, writing, accounts, and navigation; 6 of these Boys are to be selected from the testator's poor relations, and 14 from the sons of poor widows.	Master-General of the Ordnance, Principal Engineer of Government Works in the island of Portsea, Superintendent of Dockyard, Master Shipwright of ditto, Members of Parliament for Southampton, Mayor of Portsmouth.	This Charity is in full operation.
That 6 poor Children be educated at the School of the Beneficial Society, Portsea.	Peter Stubbington, John Lutman, Henry Collins	This Charity is in full operation.
That the executors purchase £10,000 4 per cent. Consolidated Bank Annuities, for the purposes specified in the will, and that the annuitants receive an equal proportion of the interest, if not removed for any of the undermentioned causes:—1. Keeping a public-house; 2. Adultery, fornication, or habitual drunkenness; and, 3. Widows or single women marrying after election.	George Doyle, Frederick Bouth, Alexander Poulden, and others.	Subsequently £10,000, 4 per cent. were converted to 3½ per cent., and a question concerning the appropriation of the dividends thus changed was taken before the Court of Chancery; the expenses of the suit being discharged from the charity fund, there remains now an income of £325 to be applied annually for the benefit of annuitants. This charity is in full operation.
That the proceeds of £300 be distributed to the poor Widows of the parish of Portsea, and £200 be given to the Directors of the Portsea and Gosport Hospital.	Thomas Smith Edgcombe	This Charity is now in operation.

Savings Bank.

The following statements of the Portsmouth and Portsea Bank for Savings, which was established in the year 1816, afford a convincing proof that the poor are desirous of availing themselves of the benefits arising from this useful institution:—

Classes.	November, 1828.			November, 1841.		
	No. of Ac- counts.	Amount of each Class.		No. of Ac- counts	Amount of each Class.	
		£	s. d.		£	s. d.
Balances, including interest, not ex- ceeding £20	603	4,653	4 0	1,511	11,214	15 8
Exceeding £20 and not exceeding £50	474	14,255	6 4	1,023	31,282	16 4
" £50 " " £100	217	14,523	18 5	478	33,774	8 3
" £100 " " £150	70	8,069	6 4	133	16,161	8 9
" £150 " " £200	34	5,661	4 8	101	16,607	1 10
" £200	9	1,860	5 8	8	1,640	11 8
Number of Depositors	1,407	49,023	5 5	3,254	110,681	2 6
Charitable Societies	10	362	1 11	23	1,514	14 3
Friendly Societies	14	1,872	1 1	35	10,300	4 8
Total.....	1,431	51,257	8 5	3,312	122,496	1 5

Friendly Societies.

The following is a list of the Friendly Societies established within the borough of Portsmouth, and existing in the year 1841:—

Name of Society.	Where Established.	Date of Enrolment.
Religious Friendly Benefit Society.....	Portsea	Easter Sess. 1836
Provident and Humane Society	"	Mich. Sess. 1836
Ebenezer Benefit Society	"	" "
United Brothers' Benefit Society	"	" "
Philanthropic Burial Society	Landport	" "
St. Thomas' Amicable Benefit Society	Portsmouth	" "
United Brothers' Benefit Society	Landport	Epiph. Sess. 1837
Royal Marine Serjeants' Death and Discharge...	Portsmouth	" "
Widow and Orphans' Fund Society	Landport	" "
Hebrew Benevolent Society	Portsea	Mich. Sess. 1837
St. Alban's Friendly Society	Portsmouth	Mids. Sess. 1838
Benign Benefit Society	Portsea	" "
Present Help Burial Society	Landport	Epiph. Sess. 1839
United Brethren Benefit Society	"	Mich. Sess. 1839
Portsea Island Annuitant Society	Portsea	Easter Sess. 1840
Union Insurance Benefit Society	Landport	" "
Widows' Friendly Burial Society	Portsea	" "
Benevolent Brothers' Society.....	Portsmouth	Mich. Sess. 1840
Good Samaritan Burial Society	Portsea	Epiph. Sess. 1841

Indigenous Plants.

The following is a summary of the Indigenous Flowering Plants and Ferns observed in the island of Portsea, and communicated to the Society to the present time, August, 1852. Several gentlemen are continuing the search in order to complete a local Flora of the island.

	Orders.	Genera.	Species.
<i>Flowering Plants.</i> —Dicotyledones	56	215	385
Monocotyledones	10	50	112
<i>Ferns and their allies.</i> —Acotyledones	2	9	12
Totals	68	274	509

Dicotyledones.

Orders.	Genera.	Species.	Orders.	Genera.	Species.
Ranunculacæ	3	15	Cornacæ	1	1
Nymphæacæ	2	2	Umbelliferæ	22	29
Papaveracæ	2	3	Caprifoliacæ	2	2
Fumariacæ	1	2	Rubiaceæ	2	7
Cruciferæ	17	22	Dipsacæ	3	3
Resedacæ	1	2	Compositæ	36	57
Violacæ	1	2	Campanulacæ	1	1
Droseracæ	1	1	Ericacæ	2	2
Polygalacæ	1	1	Illicacæ	1	1
Frankeniaceæ	1	1	Jasminacæ	2	2
Caryophyllacæ	11	22	Gentianacæ	1	2
Linacæ	2	3	Convulvacæ	2	4
Malvacæ	1	3	Solanacæ	2	3
Hypericacæ	1	3	Scrophulariacæ	10	25
Aceracæ	1	1	Orobanchacæ	1	2
Geraniacæ	2	7	Verbenacæ	1	1
Celastracæ	1	1	Lamiacæ	12	19
Leguminiferæ	12	33	Boraginacæ	4	8
Rosacæ	11	19	Primulacæ	5	6
Onagracæ	1	2	Plumbaginacæ	2	2
Haloragiaceæ	2	3	Plantaginacæ	1	5
Lythracæ	1	1	Chenopodiaceæ	6	14
Cucurbitacæ	1	1	Polygonacæ	2	13
Portulacacæ	1	1	Thymelæacæ	1	1
Illecebracæ	1	1	Euphorbiacæ	2	5
Grossulariacæ	1	1	Urticacæ	4	6
Crassulacæ	1	2	Amentiferæ	4	7
Saxifragacæ	1	1			
Araliacæ	1	1	Total	215	385

Monocotyledones.

Orders.	Genera.	Species.	Orders.	Genera.	Species.
Orchidacæ	4	5	Aracæ	4	8
Iridacæ	1	1	Juncacæ	2	10
Liliacæ	3	3	Cyperacæ	2	18
Tamacæ	1	1	Gramina	27	57
Alismacæ	2	3			
Fluviales	4	6	Total	50	112

Acotyledones.

Orders.	Genera.	Species.
Filices	8	11
Pteridioides	1	1
Total	9	12